



COMEBACK TO CUBA

January 1999

The Combat Edge

Air Combat Command's
Mishap Prevention
Magazine

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Lt Col Ezequiel Parrilla, Jr.
HQ ACC/SEP
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*Courtesy of the Federal Emergency Management Agency (FEMA),
Washington DC*

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ACCent on Safety

Have you heard about “The January Challenge?” No, I don’t mean seeing if you can keep your New Year’s resolutions longer than through January. And, no, I don’t mean the challenge presented by trying to shed the poundage gained during the annual holiday foodfest (it wasn’t only the turkey that got stuffed!). What I’m talking about is the safety initiative that our USAF Chief of Staff introduced.

I sense there are a couple question marks floating out there. Well, if the “in-the-know” crowd will bear with me, I’ll try and educate the rest.

“The January Challenge” is a flight safety-focused effort with the goal to counter the particular risks inherent to post-holiday psycho-social withdrawal, proficiency lapses due to lack of recency, and adverse meteorological conditions. Huh? Okay, in Lieutenant terms — Zero airplane accidents in January and the months that follow. Simple enough? I thought so, but let me explain all that babble part because those are the risks peculiar to January (and the months right after).


First, what about this “post-holiday, psycho-social withdrawal” stuff? Well, for starters, don’t try to look it up in any medical text because it’s just a dumb fighter pilot’s term and not something from a sheepskin carryin’, *bona fide* professional. But believe me, it’s still real. Way back in a prior life, while attending a quasi-educational penal institution (or vice versa) in the Colorado Rockies, we used to call this time of year, “The Dark Ages.” The nights are long, the days are short, and mostly “the sun don’t shine.” Plus, it just doesn’t seem like it will ever end. January is just the start of a tunnel with no light at the end. In fact, it doesn’t even begin to break out of these doldrums until the water is warm enough in the Gulf for the Spring Break’ers to head for the beach. This is a time when some folks are just naturally grumpy, short-tempered, and hardly capable of keeping their minds on their work.

Another influencing factor has to do with our schedules. Whether your workplace is sitting inside an air machine, or you toil at the outside labors which ensure the bird is ready to fly, you’ve probably been significantly backed off from the tempo of just a few months ago. The holidays (and I mean all of them — Thanksgiving, Hanukkah, Christmas, and New Years) are when we American families typically devote time to each other. Usually, the old air base looks most like a ghost town during the week between Christmas and New Years. All those things you were in the habit of doing day in and day out are now a struggle to recall. What was Step 4; and what did that Note, Caution, or Warning say? All that stuff between your ears turns to mush, the “bright and shiny” gets dull, and the “golden hands” turn back into just so much rock.

It’s bad enough that we have time working against us; Mother Nature also has to add her bit. The boys and girls up on “the northern tier” have already seen Winter’s pre-game show. But, in January, it all starts in earnest. Up North, it’ll be snow going sideways until it stacks up taller than a Buff’s main tire. Down in the South, you’ll be able to tick off the calendar by the cold fronts — every three days another, whether snow, rain or sleet, or just a big blow. Any point of the compass, to a flyer or maintainer, winter is a definite threat.

Well, now maybe you understand more about the Chief’s “January Challenge.” If you still have doubts, try some numbers — in ACC and our gained units, we have lost five aircraft in the last three January’s. On top of the flight mishaps, we’ve also had more than our share of ground accidents, both on and off duty. “The January Challenge” is real. It requires you to get beyond those risks I’ve talked about and to keep your cranium centered on the task at hand. Use that ORM stuff we’ve been preaching. Think about risks and benefits BEFORE you act. Oh, and, come April, we’ll take a nose count of those who’ve met “The January Challenge.” Be there!

Colonel Turk Marshall
Chief of Safety



*Lt Col Ezequiel Parrilla, Jr.
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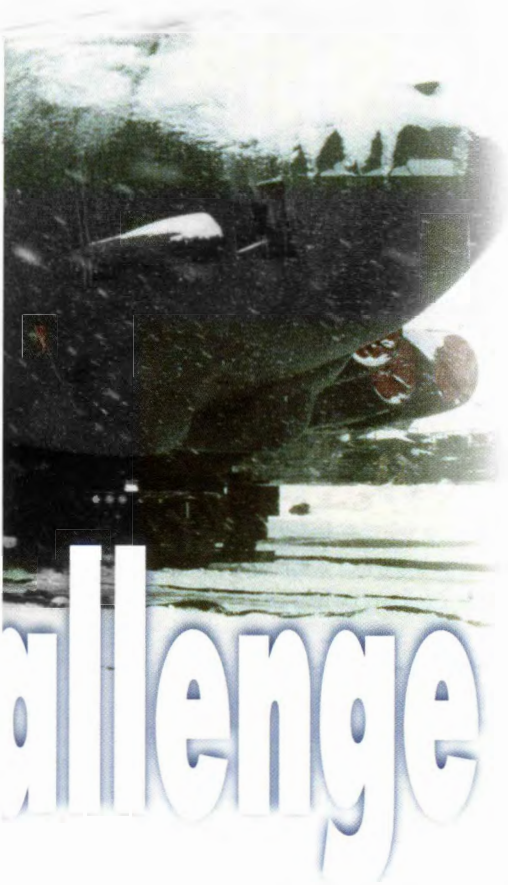
Facing the January Ch

Our sortie had been a fun-filled night mountainous terrain avoidance mission in the Utah Test and Training Range. Having acquired a few gray hairs in the process, we returned to our northern U.S. base to find a not so unusual January forecast of low ceilings with drifting snow. After a hair-raising night instrument approach, coming in and out of clouds with an occasional hint of icing along the way, we broke out at minimums. As I transitioned for landing, I had in front of me a sight of snow-covered flat ground as far as the eye could see. There was enough wind to make it appear we were above a sea of snow snakes, making it impossible to tell where the runway was if not for the dimming runway lights. It took a lot of effort (and some prompting from my copilot) to overcome the impres-

sion of already being high above the runway as I riveted my attention on the runway and Visual Approach Slope Indicator (VASI) lights to a safe landing. Twelve years later, that one night of landing on a snow-covered runway stands out from all the rest of the other landings I experienced through three winters at “El Forko Grande.” This is because I know how close I came to letting a visual illusion make me land short of the runway.

The month of January brings a lot of changes and challenges along with it — and not only to those aircrews stationed in the upper states. In fact, my ugliest landing (or maybe I should say landings) was on a clear Kansas night in January. After a night sortie in the B-52, the weather for homeplate was reported as clear of clouds — 3000 runway visual

range (RVR). Initially, I thought the weather folks were still suffering from the aftereffects of a New Year’s Eve party since I could already see the Wichita city lights. It certainly looked clear to me; but as it turned out, there was some fog on the airfield. The approach was normal with the runway lights and VASIs clearly visible on short final, so I thought the fog was clearing up. As I brought the 8 throttles to idle and started trimming like a madman to get the Buff to a landing attitude, the runway lights went from many to a handful to zero. It happened about that fast, along with whatever runway markings there may have been. For just a second, I thought... “Hey, I am on centerline, just inches above the runway; and obviously there are no winds, since the fog is just sitting here. Maybe I should just let it settle



DoD photo by SrA Elizabeth Copeland

stayed visible to continue. However, it was enough of a distractor that I stopped trimming too soon and — as advertised — we hit nose gear first. This was followed by bouncing to the rear trucks, then back to the front trucks one last time before I finally stopped the jet from playing urban cowboy and got stable into a landing attitude.

We then landed firmly, leaving no doubt in any of the crewmembers' minds that we were not going airborne again... thereby demonstrating one more time Mr. Boeing's ability to build sturdy airplanes. Try as I could, I could not come up with a way to blame the copilot for the landings; so I tried the "Any landing you can walk away from is a good one" line without success. The rest of the crew still tagged me for the refreshments that night, and I guess that much-used line can qualify as an entry in the list of great lies in aviation along with other overused ones such as "No need to look it up, I have it memorized," "The jet will be ready in 2 hours sharp," or "I broke out at minimums." (Note: I did break out at minimums in the anecdote presented in my introductory paragraph. Honest... really... I did!) One more lie I think we can add is the much abused, "The Probability of Kill (Pk) of the ground is 100%." Granted, if you hit the ground at high speed, the Pk is up there; but how many "FIRM landings" can a pilot make? Add that to the list.

Landings and takeoffs are the closest we should ever be to the ground. However, the airspeeds are slow enough that most ugly takeoffs and landings wind up as another data point in our experience log. The changing environment and proximity to the ground are two of the factors that make takeoffs and landings among the most hazardous phases of flights. The proximity to the ground requires prompt action from you and like the man said, "Aviation can be very unforgiving of carelessness, incapacity, or neglect."

to the runway, and then surely I would see the lights and runway lines that close to the ground."

NAAAH! I added power and took it around. The folks at the tower said afterwards it was a great imitation of a land shark, since only the tail was visible from their vantage point. By now, the visibility at the other side of the field had improved significantly and the winds were still calm; so we came around to try the opposite runway. We had another discussion on the procedures for landing safely and what to do if the runway did the disappearing act again. The approach again was normal. As the Buff transitioned from the ground-trolling nose-low approach attitude to a slightly nose-high landing attitude, the lights started doing the disappearing act again. But this time, enough lights and runway markings

Although the takeoff and landing phases generally represent a minute portion of the mission, 10 of the last 35 ACC Class A mishaps occurred during these phases. In 6 of these 10, the operator was a factor. In all of these 6, there were other circumstances that led the pilot to a point where his actions could have prevented the mishap. Taking off and landing an aircraft are basic skills we learn when we first start to fly. Our training system is set up to prevent a situation where a pilot just loses his basic skills to do these and goes out to fly on his own. However, as other factors start affecting you before and during a mission, you may require more than these basic skills in order to stop the chain of events leading to a mishap.

The January timeframe is one when we have potential for several other factors to affect our performance... and not only during takeoff and landing, but on everything we do. I already pointed out a couple of examples of weather effects, but there are many others. The holidays will probably result in many flyers spending 2 or more weeks without flying. Once you come back, think twice on the first few flights before trying to do something that will normally challenge your skill or someone else's. Getting back up-to-speed for local flying or a deployment during this time can present a higher risk than usual when added to other factors.

Historically, January has been a month with low Class A mishap rates for ACC/ACC gained units, with 6 class A mishaps since the command's inception. However, 5 of those took place over the past 3 years. We must also keep in mind that Class A mishaps represent the tip of the iceberg when it comes to identifying hazards. Regardless of the Class A rates, the increased risk during this month is there. We must not put our mishap prevention efforts to rest just because we have done well in the past. The "January Challenge" is there, and we must do our best to manage our risks during this period. ■



Chaplain Thomas P. Azar, 10 ABW/HC, USAFA CO

Winter is a time when many military personnel and their dependents go skiing, ice skating, snowmobiling, hiking, and hunting. In addition to these cold weather sports activities, the winter holidays are also a time for increased social gatherings among family, friends, and co-workers. As part of the mirth and merriment associated with the winter season, there is a tendency for some individuals to move beyond moderation in the amount of alcohol they consume. In doing so, they enter an unforgiving road — a “Cold Road to Disaster.”

Let me share a true story of a couple that moved beyond moderation in alcohol consumption. This frightening occurrence demonstrates how overindulgence in intoxicating beverages has its price. While attending a squadron Christmas party, Peter and his wife Patsy started drinking hard liquor from the start of the social hour to well past the formal program and dancing time. At the beginning of the gathering, the Commander and First Sergeant both made several announcements about safety. They highlighted the use of designated drivers as well as the dial-a-ride

program and the “blue goose” transportation. Unfortunately, this couple failed to heed their senior’s advice. As Peter and Patsy became more inebriated, physically exhausted, and mentally incapacitated, someone should have read the handwriting on the wall. Neither of them were fit to drive. After the party was over, they sped off in their 2-door compact car. Peter and Patsy were on a “Cold Road to Disaster” — their night of excessive drinking would soon take its “toll.” Driving at greater than highway speed, Peter lost control of their vehicle which resulted in a head-on collision with a large tree. The impact of their small car was so great that they were both crushed instantly. Peter and Patsy lost their lives that night... all because they took the risk of driving in a drunken condition. A time set aside for celebrating holiday joy and happiness that was originally aimed at creating a festive evening ended with trauma, grief, and a funeral.

As a military chaplain, I often see the unfortunate end results of mishaps involving a drunk driver. An individual who fails to heed the warnings of excessive drinking will

most likely in the long run be the cause of a serious casualty (or fatality) or end up being one himself. Needless loss of life heartlessly tears at the fabric of families and squadrons for decades. As a chaplain, I have the difficult task of serving as part of the casualty notification team that informs next of kin, friends, and squadron members that another human being that they know and love was killed. I’ve been there too many times.


The old cliché of “drinking and driving don’t mix” is true. There are no benefits associated with driving a vehicle on the road in a drunken condition — simply put, it’s not worth the risk... NEVER! Appointing a designated driver or arranging for a taxi to drive you home after drinking alcohol at a social function are ALWAYS good rules to follow. Rules like these are there for a reason, and that reason is to keep you, your loved ones, and your friends off of the “Cold Road to Disaster.” The next time you consider taking the risk of drinking and driving, do yourself (or the rest of us) a favor and also consider the consequences. In doing so, you’ll realize that drunk drivers never win — that’s a sure thing! ■

Weapons Safety Stats

ACC Losses for FY 99

(1 Oct 98 - 1 Dec 98)

Number of Weapons Mishaps / Dollar Losses

	Class A	Class B	Class C
8 AF	None	None	None
9 AF*	None	None	None
12 AF	None	None	None
AWFC	None	\$425K 	None
TOTAL	None	1/\$425K	None

Weapons Fatalities - None
Nuclear Mishaps - None


* Includes all Class C mishaps in CENTAF AOR
 ** Cost of most recent mishap(s) not yet available

 = Missile Mishap
 = Explosive Mishap

Class A - Fatality; Permanent Total Disability; Property Damage \$1,000,000 or more
 Class B - Permanent Partial Disability; Property Damage between \$200,000 and \$1,000,000
 Class C - Lost Workday; Property Damage between \$10,000 and \$200,000

The sky was crystal clear — the kind of clarity found only on a bitterly cold night. It was 40 below zero as we pulled up in front of the aircraft and loaded up.

North to Alaska



*Maj Lori J. Pulaski
HQ ACC/SEF
Langley AFB VA*

40 Below Zero... and Cleared to Launch

RINGGGG!!! Somehow... the insistent noise of the telephone intruded into my sleep and brought me to a semi-conscious state as I turned on the bedside lamp and picked up the handset. “This is the Command Post. You are cleared to launch in one hour. Authentication code is MZ.” Hearing the words “you are cleared to

launch” brought me bolt upright and scrambling for a pencil to finish copying the command post instructions. After hanging up the phone, I glanced at my watch — 0132 — otherwise known as “O-Dark Thirty.” (Doesn’t everything happen in the bleak hours of the night?)

After donning my flight gear and pulling on my mukluks, I headed out the door to wake the crew. With my crew finally awake

and ready to go, we headed for the jet. The sky was crystal clear — the kind of clarity found only on a bitterly cold night. It was **40 below zero** as we pulled up in front of the aircraft and loaded up. Heaters were attached to all four engines and into the cockpit area as we completed our checklists and made ready for taxi. Just before buttoning up the aircraft, we removed the last heater. Immediately, the cold struck us.

By the time we taxied to the end of the runway and were cleared for takeoff, the temperature in the cockpit had suddenly dropped from a “balmy” 60 degrees to around 40 degrees. We all were starting to feel the impact of the falling temperature in the cockpit — especially in our fingers (i.e., through our gloves). In fact, the temperature in the aircraft had dropped so fast that we saw a cool mist of air form with each breath we took. The takeoff was uneventful, and we were off the ground heading to a mission where... “if I told ya, I’d have to kill ya.” Once we reached cruise altitude and passed over Mount McKinley (the highest mountain peak of North America — over 20,300 feet in elevation — located in South Central Alaska), I began to think about a true story I read in the safety annals of Strategic Air Command (SAC). Here’s the account of that tragic event.

A Story of No Survivors

A tanker crew was scheduled as a spare for an operational mission much like the one I was on, with the temperature at **50 below zero**. Because of many different maintenance problems, the mishap crew was assigned as primary for the mission. The portable heaters for the cockpit were removed just prior to engine start. After starting engines, the mission was delayed and the engines were shut down. There was no heat available in the aircraft. Approximately 1 hour prior to rescheduled takeoff (2 1/2 hours after initial engine start), the crew asked for — but was denied — portable heaters due to the impending launch. (Note: The KC-

135 does not have a very effective heating or cooling system while on the ground; hence, the request for portable heaters). One hour later (3 1/2 hours without heat) the crew launched, reported having a gear malfunction, and requested return to base. The burned wreckage was found 6 miles from the base. There were no survivors.

Prepare, Prepare, Prepare

Before we departed our warm base in the south and proceeded “North... to Alaska,” we — my entire crew — discussed and practiced cold weather procedures. We reviewed everything we could get our hands on: Dash 1 guidance, previous trip reports, “intel” from other crews who had been there/done that... we did it all. I even snagged the simulator so we could practice the hydraulic warm-up procedures. We also went over every approach available for Alaska. We all knew that “preparation was the key” for flying safely in cold weather.

Coming from a warm weather base, it was very difficult to internalize the cold weather procedures. It was all theory. However, no matter how well we thought we were prepared, it still wasn’t exactly like the real thing! In the sim, landing was somewhat of a breeze. But in real life, the landing was relatively sporty; and it wasn’t even snowing! The runway had been plowed only 75 feet on the centerline — it was either “hit center” or “off into a snowdrift!” I can honestly say that after landing the jet in those cold weather conditions, I was glad that we spent time preparing for such a mission. I firmly believe

that preparation is key to flying in hazardous winter conditions. Nobody will convince me otherwise.

The most important problem when dealing with the Alaskan winter was (and still is) the cold. As aircraft commander, I was responsible for my crew — including the crew chiefs. Their well-being had to take a front row seat. The cold sapped our strength and caused problems we were not always ready for. It slowed reaction times — mentally (with the cold) and physically (by the amount of clothing required to stay warm). However, let it be known that — as a crew — our mental and physical limitations didn’t hamper our big snowball fight!

As demonstrated in the earlier SAC mishap, extensive exposure to sub-zero temperatures can dramatically degrade aircrew performance. Should they have aborted the mission? Perhaps. But how about you? Would you abort your mission after waiting for a long period in the cold?

We had a couple of other missions while in Alaska where we were placed in a similar situation to the mishap crew I discussed. Hindsight they say is 20/20, and I can offer this as I look back on my trip to the great white North. Before you go anywhere in the winter (even for a “local” sortie), review the Dash 1 procedures, especially those you may not be completely familiar with. Know what is available at your destination to support your aircraft. Plan on the worst case scenario, and know how to handle it. Most of all, “knock it off” if anything (and I mean anything), does not pass the common sense test. Plan, prepare, and fly safe! ■

Ask Orville!



*Col Ronald L. Garhart
HQ ACC/SEO
Langley AFB VA*

This month's letter comes from a CRM/ORM skeptic. He seems a bit confused about their relationship and whether or not one was derived from the other. I've been chompin' at the bit to get at the keyboard to shed some light on this subject. Here's what he wrote, along with my usual eloquent response. Check it out!

If you have any questions or comments regarding ORM, send them to:

"Ask Orville!"
HQ ACC/SEO
175 Sweeney Blvd
Langley AFB VA 23665-2700
DSN 574-8800, Fax DSN 574-8975

Hey, Orville,

I have a sort of "Chicken or Egg" type question for you. As a few of our squadron mates were winding down the week, the subject of Operational Risk Management (ORM) vice Crew Resource Management (CRM) came up. Go figure — it must have been a slow week. At any rate, we were divided over whether CRM is a subset of ORM, or if ORM is a subset of CRM; and some of us thought that they weren't related at all. We did reach consensus regarding the utility of CRM in fighters, however, especially single-seat fighters; and the survey said... a big "thumbs down." I am sure that it is great for airline pilots and even has a place in some of our "family model" military aircraft; but in fighters, we just don't see much payback for all those training hours and dollars.

*Respectfully,
Capt Rick Miller*

Dear Capt Miller,

Thanks for providing me an opportunity to address this issue. I must admit that initially I didn't understand why folks even cared about any CRM/ORM relationship; but after a little research, the picture cleared up. Here is the deductive reasoning that some of you shared with me. [If ORM and CRM are somehow linked, and if CRM is looked upon as a square filler of minimal utility, then it follows by association that ORM is also of little value.] That tidbit from you Jailhouse Lawyers got Orville's undivided attention!

Before we proceed, let's acknowledge a common mental roadblock for you single-seat fighter types, the "C" in CRM. That's right, the word "Crew" really throws some of you for a loop; but a subtle change of perspective is called for, as demonstrated by the task distribution during an emergency. Just as the co-pilot in a crewed aircraft reads the checklist as the pilot performs the emergency action steps, so does a wingman or Supervisor of Flying (SOF) perform those same functions for single-seat aircraft pilots. We all need somebody to back us up, especially in emergencies and complex operations. And in many ways, CRM is a greater challenge in single-seat aircraft since the individuals cannot actually observe the actions of each other (e.g., an improper switch is thrown or a step in the checklist is omitted).

Now back to the ORM/CRM comparison. The easy way out of this for me is to say that they are not connected and thereby avoid any negative spillover from CRM to ORM. But that is not the case; and from the tone of your letter, I think you know it. As Ross Perot would say; "Here's the deal." Broken down into its most basic benefit,

ORM is anything that limits or reduces risk. And the bottom line for both crewed or single-seat aircraft is that CRM reduces risk. In fact, CRM is every bit as much of a life skill as your instrument cross-check. Let's take a closer look.

What are the anticipated results when a pilot of poor instrument proficiency is faced with shooting an approach in the weather all the way to published minimums? Most often the results are less than desired (go around, divert — certainly much sweating and death gripping of the controls), and occasionally the results are life threatening. Add to this scenario a night approach, in heavy rain, to a strange field, in the middle of a systems emergency (you make up the variables), and even pilots with normally strong instrument cross-checks may experience moments where that cross-check breaks down. Regardless of where your skill level falls in this continuum, we can all likely agree that building and practicing a sound instrument cross-check during periods of relative calm is generally preferred over hoping that we never truly need to call on that skill.

Similarly, if sound CRM habits are not part of your normal operating mode, or if your CRM breaks down in the middle of a complex mission or an emergency, the results can be just as devastating as when an instrument cross-check breaks down. When things start to "go South on you" (you know, one of those days when you should have stayed in bed), effective CRM could well mean the difference between a happy or tragic end game. And just like the instrument cross-check, CRM has to be there when you need it. You cannot call on skills that you haven't developed and practiced.

So what are the anticipated results when CRM breaks down? Here are some excerpts of less than desirable results of poor CRM taken

straight out of recent single-seat aircraft mishap reports:

- Safety Investigation Board concluded that even though all members of the mishap flight had received CRM training, there were deficiencies in applying the lessons taught in class. CRM was a factor in this mishap.
- Fundamentals of CRM were lacking. Entire flight was not involved in the planning of the mission.
- SOF observed line-of-sight and steep angle of descent problems, but said nothing before impact.
- The mishap instructor pilot allowed overconfidence in the mishap pilot's airmanship and experience to dissuade him from actively engaging in the mishap flight.

Do you see how the safety boards refer to the "mishap flight" and not just the aircraft in the smoking hole? Do you see how findings extend to external parties like the SOF and not just the pilot on the controls at the time of the mishap?

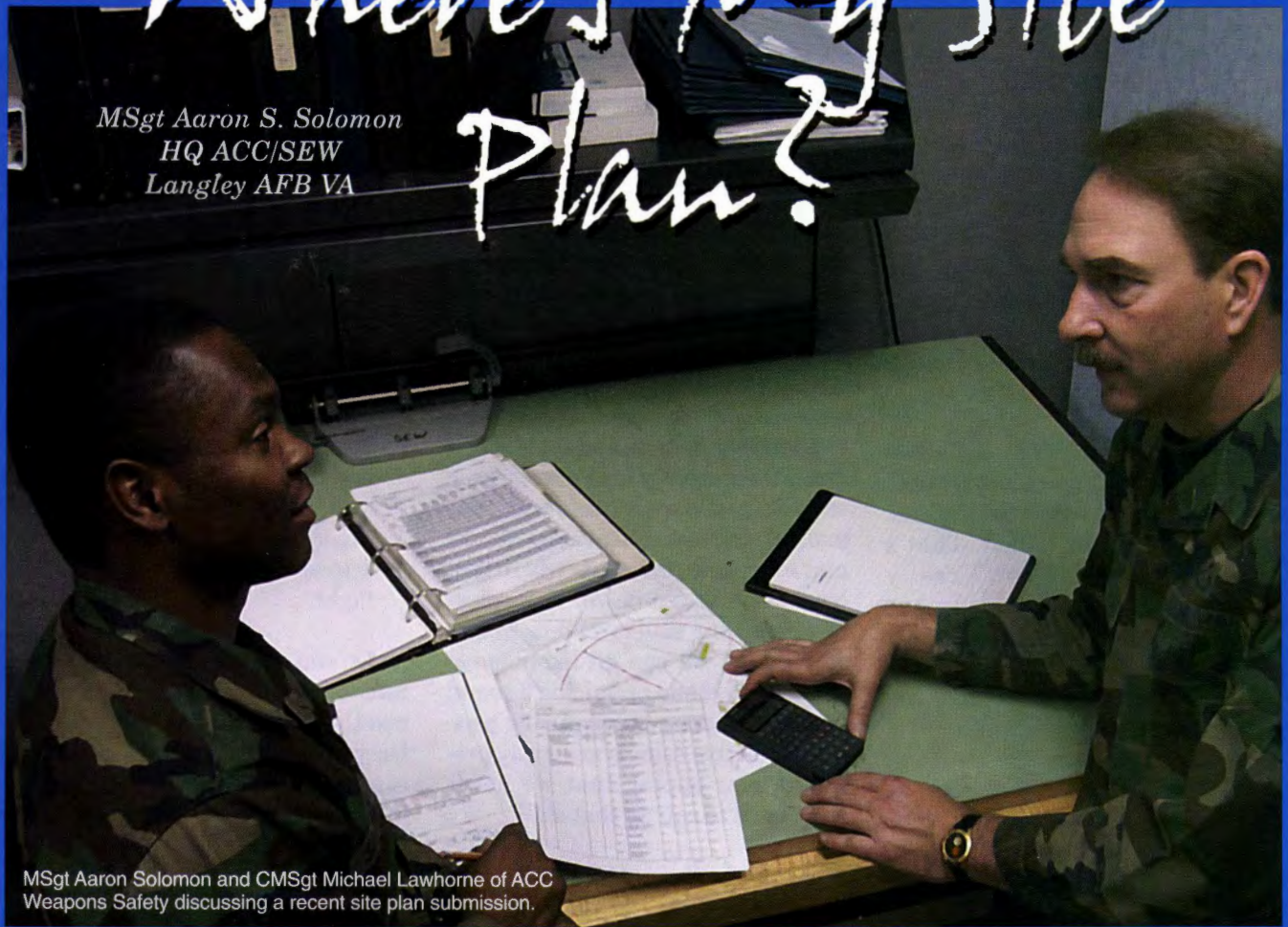
Getting back to your original question, regardless of which came first — CRM and ORM are definitely related in purpose. Fully developed and applied CRM minimizes risks to flight, and anything that reduces risk is a good application of Operational Risk Management. Remember Rick, these are not "once-a-year" training requirements. On the contrary, ORM and CRM are life skills that you must develop, practice, and continually apply every bit as much as your instrument cross-check... the results can be ugly when any of the three break down at the wrong time.

Keep those cards and letters flying in,

Orville R. Mudd
ORM Dogfight Veteran

Where's My Site Plan?

*MSgt Aaron S. Solomon
HQ ACC/SEW
Langley AFB VA*



MSgt Aaron Solomon and CMSgt Michael Lawhorne of ACC Weapons Safety discussing a recent site plan submission.

From my vantage point as command manager for explosive safety, I see both sides of the coin. On the one hand, I see and talk to the wing weapons safety manager caught up trying to meet his/her wing's mission while trying to decipher explosive safety standards written for people with alphabets following their signature. On the other hand, I see and talk to those folks with alphabets following their signature, who see explosive safety site planning as a go/no-go process. My main responsibility for the command is explosive site

planning. I like to think of myself as a facilitator. I don't originate site plans; I simply review them for compliance with Department of Defense and Air Force explosive safety standards. It's quite challenging and sometimes down right frustrating. Frustrating... because I'm caught in the middle. As you know, MAJCOMs have very distinct missions; as such, operational requirements dictate day-to-day activities. At times, explosive site planning is not very responsive to those requirements. Simply put — explosive site planning is compliance

oriented and not customer oriented.

This is where I come in. Being caught in the middle, I have to be conscious of these opposing forces. Don't get me wrong; the Air Force Safety Center (AFSC) and Department of Defense Explosive Safety Board (DDESB) would like nothing better than to approve explosive site plans (ESPs) in a timely manner fulfilling everyone's needs. However, this will not happen at the expense of compliance with explosive safety standards. I would like to address a couple of things that can be done to improve

our site planning process so that it is a little more customer oriented and responsive.

Rule 1

The first rule is to “keep track of your site plan submission.” Many hours go into developing an explosive site plan package. Besides the time invested, the mission of the wing is frequently dependent on an approved ESP. In addition, design money has oftentimes been invested into a new facility. Therefore, don’t leave your ESP to chance. Did it make it to its destination? We often take this important first step for granted. After the submission of an ESP, you may think your wing’s job is done; on the contrary, it has only begun. You know better than anyone else does when you need an ESP approved. When the earthmovers show up on your base (and your ESP hasn’t been approved), it’s almost too late to start asking questions.

There are several ways to keep track of your ESP submission. If you didn’t already know, the Weapons Safety Branch at Headquarters Air Combat Command (HQ ACC/SEW) has a web page with a listing of all pending site plans on file and their current status. ESPs are listed by base. The website address is: www.mil.acc.af.mil/se/. Of course, there may be a lag time between when the status changes and when the web page gets updated. If in doubt, call for an up-to-the-minute status. After your site plan leaves our office (this will be annotated on our web page), check the AFSC web page (www-afsc.saia.af.mil) for receipt and status. Currently, the DDESB doesn’t have a web page

listing site plan status. In my experience, the reviewers at the DDESB are very efficient when reviewing ESPs; so once it’s at their level — barring any complications — approval is imminent. If you absolutely need to know the status of a site plan sent to the board, please let us know.

Rule 2

The second rule is to “respond in a timely manner to queries concerning your ESP submission.” As I mentioned before, the job isn’t done once the ESP leaves your base. We all see and interpret things differently; and there are times in the haste of submitting a site plan or applying the complemented rules of Quantity-Distance (QD), mistakes are made. Queries come from all levels — NAF, MAJCOM, AFSC, and DDESB. Whenever I receive a query concerning a site plan I have reviewed and submitted, I try not to take it personal. I look at it in one of two ways: (1) either I made a mistake and overlooked something, or (2) I didn’t explain something sufficiently in my package for the next reviewer. Either way, the goal is to straighten it out and keep the site plan moving... the sooner

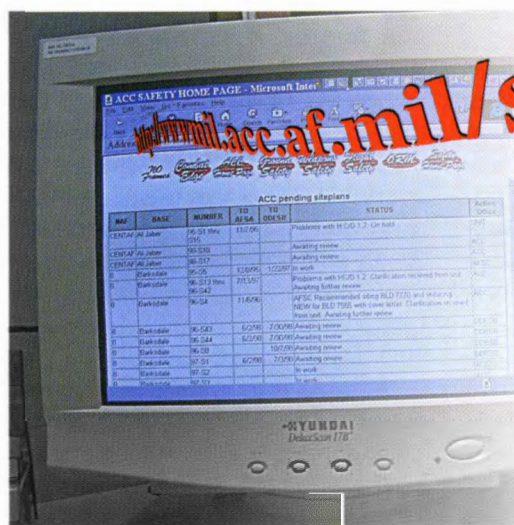
the better.

The longer the delay for needed information, the more likely the reviewer will put that ESP aside and start on something else. In this event, it takes considerably longer to get back to the ESP, even after the requested information is received. If we have requested information on a site plan you have submitted, it will appear on our web page; and “Unit” will be shown as the action office. Oftentimes, unit weapon safety managers have to go to the user and/or Civil Engineering (CE) to get the requested information.

The Bottom Line

Ensure you have a process in your wing that is responsive to getting the information needed for a complete and accurate site plan submission. If not, you can expect delays; because as I have mentioned before, explosive site planning is a compliance-oriented process. Then, after submitting your explosive site plan for review and approval, keep a good track of it. Keep asking yourself, “Where’s My Site Plan?” Know where it is at all times; that’s part of your job. Also, when questions concerning your site plan

come up, you can help to keep the coordination process running smoothly by responding to each inquiry in a timely fashion. Questions that go unanswered will not result in the problem going away; they will only delay the approval process and make an already difficult situation worse. ■



Kerosene Heater Safety

Courtesy of the United States Consumer Product Safety Commission, Washington DC

DANGER: Risk of explosion. Never use gasoline in this heater.

CAUTION: Risk of indoor air pollution. Use this heater only in a well ventilated area. See operating instructions for details.

CAUTION: Improper fuel may cause pollution and sooting of the burner. Use only water clear No. 1-K Kerosene.

If you are using a kerosene heater, the United States Consumer Product Safety Commission and the National Kerosene Heater Association advise you to follow these suggestions in order to minimize the risk of fire and potential health effects from indoor air pollution.

Use only water-clear 1-K grade kerosene. Never use gasoline. Gasoline is not the same as kerosene. Even small amounts of gasoline or other volatile fuels or solvents mixed with kerosene can substantially increase the risk of a fire or an explosion.

Always store kerosene in a separate container intended for kerosene, not in a gasoline can or a can that has contained gasoline. This helps you avoid using contaminated fuel or the wrong fuel by mistake. Kerosene containers are usually blue; gasoline containers are usually red.

When purchasing kerosene at the pump, make sure to use the kerosene pump — not the gasoline pump. Some service stations have separate islands for kerosene. Some oil companies have also established quality control programs to minimize the chances of gasoline contamination of kerosene.

1-K grade kerosene should be purchased from a dealer who can certify that what is being sold is 1-K. State operated and private sector certification programs that ensure the quality of kerosene are

established in some states. Grades other than 1-K can lead to a release of more pollutants in your home, posing a possible health risk. Different grades of kerosene can look the same, so it is important that the dealer certify that the product sold is 1-K grade kerosene.

Never refuel the heater inside the home. Fill the tank outdoors — away from combustible materials — and only after the heater has been turned off and allowed to cool down. Do not refuel the heater when it is hot or in operation. In addition, do not fill the fuel tank above the “full” mark. The space above the “full” mark is to allow the fuel room to expand without causing leakage when the heater is operating.

In case of flare-up or if uncontrolled flaming occurs, do not attempt to move or carry the heater. This can make the fire worse. If the heater is equipped with a manual shut-off switch, activate the switch to turn off the heater. If this does not extinguish the fire and a suitable fire extinguisher is not available, leave the house immediately and call the fire department. As an added reminder and precaution, install at least one smoke detector near each sleeping area or on each level of the house.

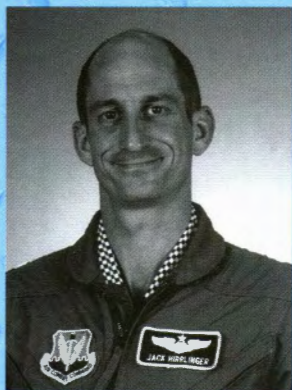
Reduce your exposure to indoor air pollutants by properly operating and maintaining your portable kerosene heater. Although portable kerosene heaters are very efficient

in the burning of fuel to produce heat, low levels of certain pollutants such as carbon monoxide and nitrogen dioxide are produced. Exposure to these pollutants can be harmful (or even fatal), especially to individuals with chronic respiratory or circulatory health problems. In low levels, carbon monoxide can cause flu-like symptoms, including headache, nausea, dizziness, and fatigue. High concentrations are deadly. To assure that you and your family members are not exposed to significant levels of these pollutants, you should adhere to the following rules of safe operation:

- Operate your heater in a room with a door open to the rest of the house.
- If you must operate your heater in a room with the door closed to the rest of the house, open an outside window at least one inch to permit fresh air to help dilute the pollutants below a level of concern.
- Always operate your heater according to the manufacturer's instructions, making sure that the wick is set at the proper level as instructed by your manufacturer.
- Keep the wick in your heater clean and in good operating condition by following the cleaning and maintenance procedures recommended by the manufacturer.
- Consider purchasing a carbon monoxide detector.

Monthly Awards

monthly awards



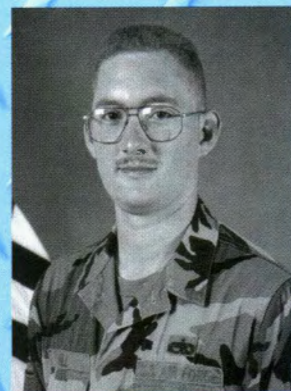
PILOT SAFETY AWARD OF DISTINCTION

*Maj Jack Hirrlinger
99 RS, 9 RW
Beale AFB CA*

During climbout on an operational U-2 mission out of Prince Sultan AB, KSA, Maj Hirrlinger experienced uncommanded irreversible full nose down pitch trim while passing FL 480. He leveled out to assess the aircraft's controllability and placed the wing gust control up to lighten control forces and raise the upper speed margin. The U-2 gust feature raises the neutral position of the wing flaps and ailerons approximately 7 degrees above faired. This gives the U-2 a higher upper speed limit and greater structural margin in turbulence. It also disables the aircraft's flaps and raises the approach and landing speeds by 10 knots above the full flaps speeds. Following a controllability check and fuel dump, Maj Hirrlinger initiated a descent back to the landing field. Yoke controls forces can become incapacitating during descent in the U-2 due to the effects of the full pressure suit and cable and pulley design of the flight controls. Once stabilized in the descent Maj Hirrlinger used the autopilot system to assist in maintaining pitch authority. Despite fatigue, the full nose down trim, and gust up configuration he completed a flawless approach and landing. Maintenance investigation revealed a faulty trim limit switch in the aircraft's tail section and a shorted electrical control wire leading to its control valve.

CREW CHIEF SAFETY AWARD OF DISTINCTION

*SSgt Charles D. Hill
58 FS, 33 FW
Eglin AFB FL*



SSgt Hill was performing routine hydraulic servicing of the utility reservoir of an F-15C. During the servicing with the external hydraulic test stand, he bled the air from the reservoir as directed by technical data. It was at this time that he noticed the smell of jet fuel. Ceasing the operation immediately, he confirmed the hydraulic fluid drained from the aircraft was contaminated with jet fuel. With his attention to detail and high work standards, Sgt Hill immediately contacted his expediter and continued his investigation. Sgt Hill revealed the fuel-oil heat exchanger was damaged. This allowed the fuel to contaminate the utility and power control hydraulic systems of the aircraft. Afterwards, Sgt Hill immediately suggested the hydraulic test stand used to service the aircraft previously might also be contaminated. This could have resulted in numerous other aircraft hydraulic systems getting contaminated. Within minutes, the contaminated hydraulic test stand was removed from service and taken to the Aerospace Ground Equipment Section for inspection. The expert systems knowledge and actions of Sgt Hill, not only prevented the destruction of valuable combat resources, but loss of life as well.

AIRCREW SAFETY AWARD OF DISTINCTION

*Capt David C. Serage, Lt Mitch Hayes
Lt Chris Carbone, Lt Jake Garcia
Det 1, 36 OG
NAS Whidbey Island WA*

On 5 Feb 98, while staging out of Incirlik AB, Turkey, Capt Serage was leading a two-ship low-level training mission in a Navy EA-6B Prowler. Capt Serage was flying a HARM attack profile timeline when a dozen "goose-size" birds filled the windscreen. After initiating a climb, he felt two distinct thumps. The aircraft immediately shuddered and yawed to the right. The right engine EGT spiked and his wingman reported, "right engine on fire." While climbing to 8,000 feet MSL (4,000 feet AGL), and shutting down the failed right engine, Capt Serage promptly placed his vector to the pre-planned divert field, Erkilet AB, Turkey. His wingman later reported that half the radome was missing and the right engine had damage around the intake with the fire extinguished. Capt Serage's remaining engine began to compressor stall with visible flames to his wingman. He initiated a climb to 10,000 feet and prepared the crew for ejection. With the engine starting to stall and no useable throttle setting, he elected to set it to the military position which yielded a surging RPM at 70-85 percent. Now at 230 KIAS, the aircraft was losing altitude at a rate of 500-600 feet per minute. At 4,000 feet AGL with this excessive sink rate, Capt Serage and his crew still had 20 more miles and a ridgeline to clear before reaching Erkilet. Capt Serage recognized the ridgeline dropping lower in



the windscreen and below his flightpath as he reaffirmed to his crew that he expected to clear the ridge and make the field. After clearing the ridge, his wingman called the runway position at 10 miles on the nose. Turkish tower controllers were caught completely by surprise by this American aircraft approaching their field, but Capt Serage was left with only two options—land or bailout. Feeling a sigh of relief as the runway appeared out of the haze, Capt Serage noticed a C-130 turning on the departure end preparing for takeoff. He quickly and decisively utilized what little speed and altitude he had remaining and side-stepped to the shorter parallel runway, landing with only 4,000 feet of runway remaining. The jet sustained significant damage—both engines were destroyed along with major intake structural damage. Capt Serage's outstanding airmanship, flying skills, superior planning, crew coordination, and clear thinking during a serious of inflight emergencies resulted in not only the safety of his crew, but the successful recovery of an irreplaceable joint combat asset.

FLIGHT LINE SAFETY AWARD OF DISTINCTION

*TSgt Mark J. Loud
509 BW
Whiteman AFB MO*

TSgt Loud realized some of the greatest risks to the B-2 and other aircraft at Whiteman are from larger birds that circle at 500-1000 feet above ground level (AGL) off the end of the runway. To counter this threat, he developed and pioneered the radio controlled (RC) aircraft bird harassment program. The RC planes are an innovative tool flown over the runway to harass birds. A sonic screamer attached to the RC plane produces a high-pitched shrill scaring birds away. This new technique creates a win-win scenario. Not only are the aircraft protected from bird strikes, but this environmentally safe technique scares birds without endangering them. The implementation of this program was highly successful against large birds and greatly reduced the risk of bird strikes to aircraft.



To make the RC program go from idea to reality, Sgt Loud developed a 4-step program to train prospective RC pilots to safely fly the aircraft. He coordinated with Base Operations personnel to have a safety and quick access location for aircraft storage. Additionally, he coordinated with all effected agencies and developed, authored, and published a comprehensive wing operating instruction (OI). This OI lists guidelines and restrictions for the safe and effective operation and implementation of the RC program. The integration of the Air Traffic Control (ATC) agency has been a vital link in the successful execution of this program. The moment ATC and base operations become aware of soaring raptors near the runway, RC personnel are immediately notified and dispatched to harass the predators. Sgt Loud briefed all 509th Bomb Wing aircrews ensuring they were knowledgeable of the program and knew what to do when they encountered a bird strike hazard.

In addition to his effort with the RC program, Sgt Loud crafted and implemented the wing Bird Aircraft Strike Hazard (BASH) Plan with over 20 base, Federal, and civilian agencies. His BASH management program was rated "one of the Best BASH Programs seen in ACC" by a HQ ACC Staff Assistance Visit in April 1998. He spearheaded an operation to remove over 125,000 blackbirds near the airfield, resulting in the hazard being removed in 3 days. He leads an aggressive BASH program to maintain the safest flying environment possible. As a result, there were no damaging bird strikes for an entire year, a first for Whiteman AFB since the B-2 started flying! Sgt Loud also created the 509th Bomb Wing Low Level Flying Restrictions Chart in which bird strikes were reduced by 50 percent, an ACC benchmark.

Obyiously, a successful BASH program is a team effort, but it took Sgt Loud's "thinking outside of the box" to maximize its potential. Sgt Loud's implementation of the RC program, along with his management of other BASH programs, continues to be extremely effective. This relatively inexpensive program will undoubtedly save the Air Force an insurmountable amount of money and, more importantly, protect a national asset and its aircrew. Sgt Loud's innovative ideas and "can do" attitude are to be commended.

WEAPONS SAFETY AWARD OF DISTINCTION



*SSgt Juan D. Sparks
93 LG, 93 ACW
Robins AFB GA*

SSgt Sparks distinguished himself by identifying and correcting an extremely dangerous safety violation during the Team Robins Operational Readiness Exercise 98-04. Sgt Sparks was performing duties as an Inspector General Exercise Evaluation Team member in an ORE Phase II play area when he identified a weapon that appeared to contain live ammunition. Live ammunition was strictly prohibited in this area. This action was particularly noteworthy in that the ongoing exercise realism included simulated attacks and base defense actions, a scenario in which a loaded weapon presented a significant risk of inadvertent discharge. The particular time period in which Sgt Sparks identified the loaded weapon involved numerous personnel, many carrying M-16 and M-9 pistols, relocating to an alternate location due to a simulated attack. During relocation, the use of weapons to secure the route taken by relocating personnel is standard procedure. The magnitude of Sgt Sparks' action is reflected in that the entire Operational Readiness Exercise was immediately suspended for several hours until it could be determined that no other weapons contained live ammunition. Although Sgt Sparks' area of expertise is quality assurance in the aircraft maintenance field, his alertness and breadth of evaluator knowledge resolved this weapon safety issue and averted potential injury or loss of life.

GROUND SAFETY AWARD OF DISTINCTION

*SSgt Donald A. Prescott
65 TRNS, 65 ABW
Lajes Field, Azores, Portugal*



ORM SUCCESS STORY: Operational Risk Management (ORM) was used to improve the Safety Interlock and Parking Brake Systems on the HSV-R-12 Refueling vehicles at Lajes, Azores.

SSgt Prescott, a Refueling Maintenance Vehicle Journeyman, identified a potential hazard with the system, assessed the best means to mitigate the risk, and developed a cost-effective and viable solution. The R-12 has a safety interlock system which automatically engages the vehicle's parking brake during refueling operations. The system releases the parking brake at the completion of refueling if the system is operating correctly. The potential hazard exists if the refueling system malfunctions in anyway. In this case, the safety interlock system will not disengage the parking brake, nor alert the operator that the parking brake is still engaged. With such a scenario, the operator would release the hand brake and drive away without any warning from the safety interlock system. The possibility of driveline failure or other damage to the vehicle would increase at this point. Damage to the drive shaft could rupture a fuel pipe, damage surrounding equipment, or injure personnel in the immediate area.

To develop a control measure, Sgt Prescott consulted the technical manual and studied the interlock and parking brake systems to identify possible means of warning operators when the parking brake was still engaged by the safety interlock system. He devised an enhancement to the parking brake system by installing a warning light on the dash panel. This simple solution created a fool-proof system; each operator now has certain knowledge if the parking brake is engaged, either from the hand brake or due to the safety interlock system. Sgt Prescott's solution was not only perfect in mitigating the risk, but quite simple and cost effective in implementation.

Sgt Prescott submitted his idea on an AF Form 1000 (IDEA Application) and the suggestion was approved locally. The installation of the warning system is now being implemented on all assigned R-12s.



UNIT SAFETY AWARD OF DISTINCTION

*68th Test Support Squadron
53 WG
Eglin AFB FL*

The mission of the 68 TSS is to maximize electronic warfare (EW) effectiveness by providing world-class support to multiservice reprogramming, acquisition, combat planning, testing, and training. The safety program is run by one officer and two NCOs who are responsible for the day-to-day ground safety of the squadron members, facilities, and equipment. The 68 TSS is spread over four different areas and includes offices, vaults, and a computer server room.

One of the warfighter support functions of the 68 TSS is to deploy personnel in support of GREEN FLAG at Nellis AFB every year. GREEN FLAG is an exercise that provides realistic aircrew training with special emphasis on EW and Command, Control, Computer, Communication, and Intelligence (C4I). During GREEN FLAG 98-2, the 68 TSS applied the operational risk management process to the operation. The unit's identification of the significant hazards and applying proper risk management to the exercise allowed for a minimization in mishaps while personnel were deployed to the location. Out of 42 unit personnel and over \$150K worth of equipment, there were zero mishaps.

In the past year, the 68 TSS Safety Program submitted three Hazard Reports to the 53 WG Safety Office. The first was a series of grooves that had been worn into the pavement in front of the Climatic Hangar. This was a significant hazard to motorcycle riders on base. After investigation, 53 WG Safety and AFDTC Safety determined that it was a problem, but not significant enough to warrant as a hazard. The 68 TSS informed all motorcycle operators about the road ruts and to avoid them if possible. The second hazard was the walkway in front of the 53 WG. When it rains, the tiles on the walkway leading up to the front of the building became slippery. One on-duty mishap report was submitted due to this hazard. The 68 TSS Safety Officer identified this as a serious risk to wing personnel walking up to the building and submitted the report. After investigation, CE replaced the tile with something that held more traction during rainy weather. This fix prevented any further mishaps from occurring and ensured the safety of wing personnel and visitors. The final report identified a significant hazard in Room 111. During fire alarm tests, personnel working in Room 111H (the WEDGE) were unable to hear the alarm due to loud computer equipment, fans, and the secure nature of the WEDGE. Compounding the problem was that there were no windows and only one exit for escape during a fire. After submitting a Hazard Report, the Base Fire Chief investigated the area and confirmed the potential risk of life. During the investigation, the Base Fire Chief also identified two other areas throughout the wing that needed fire alarms for proper coverage. This Hazard Report identified a potential and serious risk to loss of life not only to squadron, but also wing personnel. Fire alarms were placed in these areas, alleviating a significant hazard to 53 WG personnel.

Every year, the 68 TSS conducts a SERENE BYTE exercise. This exercise is designed to test the squadron's rapid reprogramming ability to users in the field during contingency or war operations. During the execution of these exercises, personnel are required to conduct 24 hour manned operations of the Air Warfare Center. Since the beginning of these exercises, there have been zero mishaps or fatalities. Personnel conducted 24 hour operations from a standstill, adjusting sleep habits, and working during evening hours to attain mission goals.

The 68 TSS Safety Program is robust, proactive, and successful in its endeavor to establish a working environment that is safe for its personnel, facilities, and equipment. To this end, the vital mission of the 68 TSS is executed with outstanding success due to the vigilance of the safety program.

Winter Preparedness Safety Tips



Timely preparation, including structural and non-structural mitigation measures to avoid the impacts of severe winter weather, can avert heavy personal, business, and government expenditures. Experts agree that the following measures can be effective in dealing with the challenges of severe winter weather:

Before Severe Weather Arrives

- Store drinking water, first aid kit, canned/no-cook food, non-electric can opener, radio, flashlight, and extra batteries where you can get them easily, even in the dark.
- Keep cars and other vehicles fueled and in good repair, with a winter emergency kit in each.
- Get a National Oceanic and Atmospheric Administration (NOAA) Weather Radio to monitor severe weather.
- Know how the public is warned (siren, radio, TV, etc.) and the warning terms for each kind of disaster in your community; e.g.:
 - ** Winter Storm Watch — Be alert; a storm is likely.
 - ** Winter Storm Warning — Take action; the storm is in or entering the area.
 - ** Blizzard Warning — Snow and strong winds combined will produce blinding snow, near zero visibility, deep drifts, and life-threatening wind chill. Seek refuge immediately.
 - ** Winter Weather Advisory — Winter weather conditions are expected to cause significant inconveniences and may be hazardous, especially to motorists.
 - ** Frost/Freeze Warning — Below freezing temperatures are expected and may cause damage to plants, crops, or fruit trees.
 - ** Flash Flood or Flood Watch — Be alert to signs of flash flooding, and be ready to evacuate on a moment's notice.
 - ** Flash Flood Warning — A flash flood is imminent. Act quickly to save yourself because you may have only seconds to escape.

** Flood Warning — Flooding has been reported or is imminent. Take necessary precautions at once.

- Know safe routes from home, work, and school to high ground.
- Know how to contact other household members through a common out-of-state contact in the event you have to evacuate and become separated.
- Know how to turn off gas, electric power, and water before evacuating.
- Know ahead of time what you should do to help elderly or disabled friends, neighbors, or employees.
- Keep plywood, plastic sheeting, lumber, sandbags, and hand tools on hand and accessible.
- Winterize your house, barn, shed, or any other structure that may provide shelter for your family, neighbors, livestock, or equipment. Install storm shutters, doors, and windows; clear rain gutters; repair roof leaks; and check the structural ability of the roof to sustain unusually heavy weight from the accumulation of snow — or water, if drains on flat roofs do not work.
- If you think you might want to volunteer in case of a disaster, now is the time to let voluntary organizations or the emergency services office know (i.e., offer your assistance beforehand).

During Any Storm or Emergency

- Monitor your NOAA Weather Radio or keep a local radio and/or TV station on for information and emergency instructions.
- Have your emergency survival kit ready to go if told to evacuate.
- If you go outside for any reason, dress for the season and expected conditions. For cold weather, wear several layers of loose-fitting, lightweight, warm clothing rather than one layer of heavy clothing. Outer garments should be tightly woven and water-repellent. Mittens are warmer than gloves. Wear a hat. Cover your mouth with a scarf to protect your lungs from extremely cold air. Wear sturdy, waterproof boots in snow or flooding conditions.
- If advised to evacuate, tell others where you are going. Turn off utilities if told to; then leave immediately, following routes designated by local officials.

During a Flood

- Avoid areas subject to sudden flooding.
- Do not try to walk across running water more than 6 inches deep; even 6 inches of rapidly running water can sweep you off your feet.
- Do not drive into flooded areas. If your car stalls, abandon it immediately — if you can — and seek higher ground.



The picture above depicts a difficult predicament for a local resident of Langley AFB VA during the February 1998 Nor'easter that flooded several streets and homes. His van stalled after he attempted to drive through the flooded area with his children. Unable to open his door, the driver had to crawl out of the window to get help. Fortunately, nobody was injured. -Photo by SSgt David White

During a Winter Storm

- Conserve fuel, if necessary, by keeping your house cooler than normal. Temporarily shut off heat to less-used rooms.
- If using kerosene heaters, maintain ventilation to avoid build-up of toxic fumes. Keep heaters at least 3 feet from flammable objects. Refuel kerosene heaters outside.
- Avoid travel if possible. If you must travel, do so during daylight hours. Don't travel alone. Stay on main roads, and keep others informed of your schedule.

If a Blizzard Traps You in Your Car

- Pull off the road, set hazard lights to flashing, and hang a distress flag from the radio aerial or window. Remain in your vehicle; rescuers are most likely to find you there.
- Conserve fuel, but run the engine and heater about 10 minutes each hour to keep warm, cracking a downwind window slightly to prevent carbon monoxide poisoning. Exercise to maintain body heat, but don't overexert yourself. Huddle with other passengers, and use your coat for a blanket.



- In extreme cold, use road maps, seat covers, floor mats, newspapers, or extra clothing for covering — anything to provide additional insulation and warmth.
- Turn on the inside dome light of your car so rescue teams can see you at night, but be careful not to run the battery down. In remote areas, spread a large cloth over the snow to attract the attention of rescue planes.
- Do not set out on foot unless you see a building close by where you know you can take shelter.
- Once the blizzard is over, you may need to leave the car and proceed on foot. Follow the road if possible. If you need to walk across open country, use distant points as landmarks to help maintain your sense of direction.

After the Storm

- Report downed power lines and broken gas lines immediately.
- After blizzards, heavy snows, or extreme cold, check to see that no physical damage has occurred and that water pipes are functioning. If there are no other problems, wait for streets and roads to be opened before you attempt to drive anywhere.
- Check on neighbors, especially any who might need help.
- Beware of overexertion and exhaustion. Shoveling snow in extreme cold causes many heart attacks. Set your priorities and pace yourself after any disaster that leaves you with a mess to clean up. The natural tendency is to do too much too soon.

Returning to Your Home After a Flood

- Do not turn electricity back on if you smell gas or if the electric system has been flooded.
- Wear sturdy work boots and gloves.
- Do not handle electrical equipment in wet areas.
- Use flashlights — not lanterns, candles, or matches — to check buildings containing natural gas, propane, or gasoline.
- Follow directions from local officials regarding the safety of drinking water.
- Clean and disinfect everything that was touched by flood waters, and throw out any such foodstuffs.
- If you want to help other victims, give cash donations to the appropriate relief agencies to buy what the victims need. Donated goods (such as used clothing — unlabeled and unsorted by size) are usually more of a logistical problem than a help. If particular items are needed, there will be public announcements and instructions concerning these.
- Don't go to the disaster scene on your own to volunteer. If you are already a volunteer, you will know where you are to report. If additional volunteers are needed for labor-intensive work (like sandbagging), public announcements will be made. ■

GROUND SAFETY AWARD OF THE QUARTER

TSgt Brook A. Morris, 3 CCG, Tinker AFB OK

TSgt Morris, as the Chief of Safety, is directly responsible for the safety management and training of over 740 assigned personnel, equipment resources costing \$240 million, weapons/munitions costing \$528,000, and facilities valued at over \$6.6 million. Sgt Morris' knowledge and superb leadership have enabled the 3 CCG to completely overhaul and improve day-to-day operations. His professionalism and dedication to safety is unparalleled, enforced by a significant, measured improvement in the group's safety record.

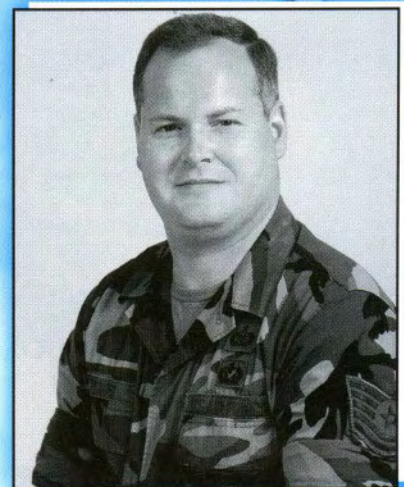
Sgt Morris designed and implemented a mishap prevention program that permitted the group to lower their on- and off-duty mishap rate by a phenomenal 48% over a 6-month period. Moreover, of these mishaps, none have been reportable. This accomplishment has allowed the group to maintain a higher mission effectiveness and combat readiness rate than ever before. He developed a new database system improving the mishap reporting of government motor vehicle injuries, and statistical tracking capability of the unit. With this information, he provides routine analyses and trend information for units to use in their mishap prevention efforts—a first for the group.

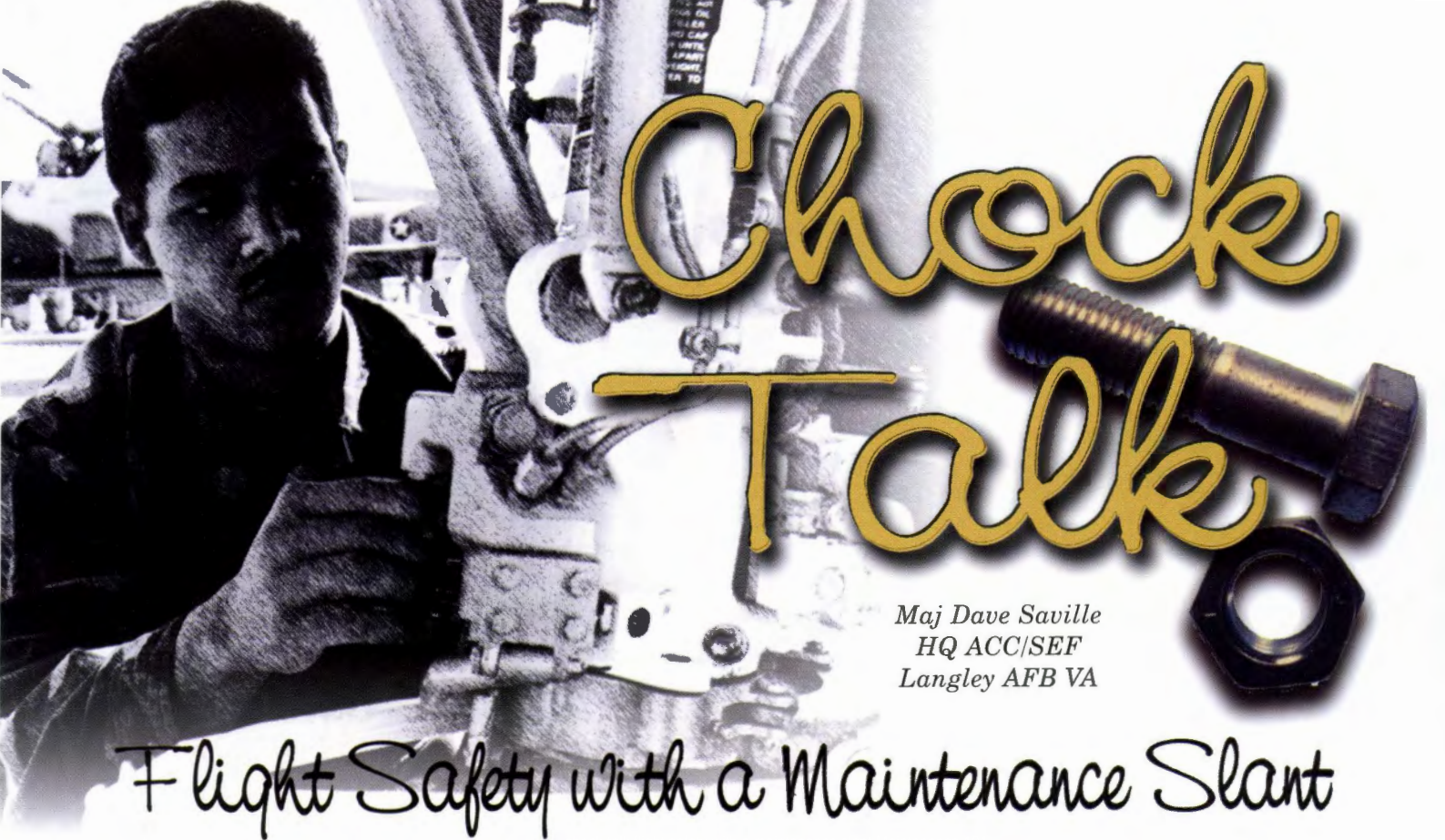
Additionally, he developed and implemented a Unit Self Inspection checklist and process, reducing unit discrepancies through training and awareness. Sgt Morris modified the Air Force's Supervisory Safety Training package to include an in-depth OSHA facility inspection checklist, program management checklist, pictures of all special purpose equipment, mishap pictures, and even some of the discrepancies found during the annual and spot inspections. This package is an invaluable time-saving, readiness-enhancing tool used for training and management of all personnel in the 3 CCG. He also designed and implemented a new Radio Frequency (RF) Radiation program (which is now being used AF-wide to prevent RF radiation mishaps) for the group and advised our Air Force Engineering and Technical Services personnel on how to rewrite Air Force Tech Orders. His efforts to improve training and education throughout the group have

increased safety awareness greatly. The Oklahoma City Air Logistics Center safety office requested Sgt Morris by name to perform two site surveys, based on his mobility and professional experience.

Sgt Morris also justified and established the first \$12K safety budget for the group, procuring over \$5K in safety videos and OSHA, fire, and electrical directives for the safety office, markedly increasing safety awareness throughout the group's 120 workcenters. His expertise has identified 13 serious facility discrepancies with Risk Assessment Codes of three or higher. Sgt Morris, in coordination with 5 squadron commanders, recommended corrective actions and coordinated with other base agencies, ensuring rapid and lasting corrective measures were taken. During the recent operational readiness inspection, the safety training packages that Sgt Morris implemented for the 3 CCG were requested by other USAF communications units. He is a safety leader who believes proficiency is obtained through continual education and personal memberships in several professional organizations such as the National Safety Council, Oklahoma Safety Council, and the National Fire Protection Agency. He has completed eight National Safety Council sponsored courses and one OSHA Training Institute course in the last year.

Sgt Morris' knowledge was witnessed by all when he was recognized as a Distinguished Author for an article he wrote in the Oct 97 edition of *The Combat Edge*. He is a "self-starter" who consistently impresses commanders with his enthusiasm, initiative, and knowledge. His ceaseless efforts in making the 3 CCG and the local community a safer place to live are exceptional.





Chock Talk

*Maj Dave Saville
HQ ACC/SEF
Langley AFB VA*

Flight Safety with a Maintenance Slant

Maintenance 101

After reading hundreds of mishap reports, my eyes are naturally drawn to those relatively few mishaps that are caused by a maintainer. Sadly, each time I read about one of those, I'm impressed by the fact that it was a poor display of "Maintenance 101."

Have you ever heard of the phrase, "Maintenance 101?" Those maintainers I've worked with know what it is because I used the phrase a lot. Yet, when asked, it's difficult to define. Simply put, it is the set of important and fundamental things you must know and do in the aircraft maintenance business in order to do it right and safe. Pilots could likewise use the term "Flying 101."

The phrase itself is borrowed from academia.

When enrolling in college-level courses, we all have to take classes like "English 101" or "Philosophy 101." It is the first in a series of courses in that discipline; and, in fact, it usually is the prerequisite to all the other related courses you want to take. You can't take "History 204: The World's Legendary Battle Campaigns" until you successfully complete "History 101: The Fundamentals of Historical Thought." You get the idea; there are important things the school insists you get right before moving on to the 200- or 300- level classes. In fact, you may find this clever jargon useful in everyday life. For example, let's say you

drove up to an automobile accident in a winter storm and asked the police officer directing traffic what happened. Let's presume his reply was, "The guy in the red car was speeding, crossed two lanes of traffic to make a left hand turn, lost control, and slid on the icy road. That's when he front-ended the school bus." At that point, you can say, "Man! There's a guy who must have failed 'Driving 101.'" "Driving 101" implies a set of essential and fundamental rules and actions that we expect every driver to know. It's also more than just "knowing" those rules; "doing" them is the real expectation.

The same holds true for aircraft maintenance. "Maintenance

101” (hereafter abbreviated “MX 101”) is a very useful phrase. It refers to things maintainers should know and do, whether they received formal training or not. MX 101 is a broad set of fundamentals for use on the flight line or in the shops that include (but are not limited to) the following:

- Tool discipline
- Wearing safety equipment
- Technical Order discipline
- Forms documentation
- Good housekeeping

The list easily grows beyond that after a short brainstorming session. Often we call it “common sense.” But is it? Is it so common? I think we assume everyone knows these essentials; but the truth is, many people learn MX 101 by trial and error. In fact, if gone unnoticed, a young maintainer can repeatedly violate a precept of MX 101 without knowing it until the “error” part of “trial and error” occurs. I have experienced it in my own life, and I see it all over the maintenance arena.

This leads me to my point for this month’s “Chock Talk” column. Violations of MX 101 lead to mishaps. Do you want to prevent tragic mishaps? Then... **Always comply with the precepts of MX 101.** Fight to keep the fundamentals strong in yourself and others. It is the single biggest contribution a maintainer (supervisor and technician alike) can do to prevent mishaps.

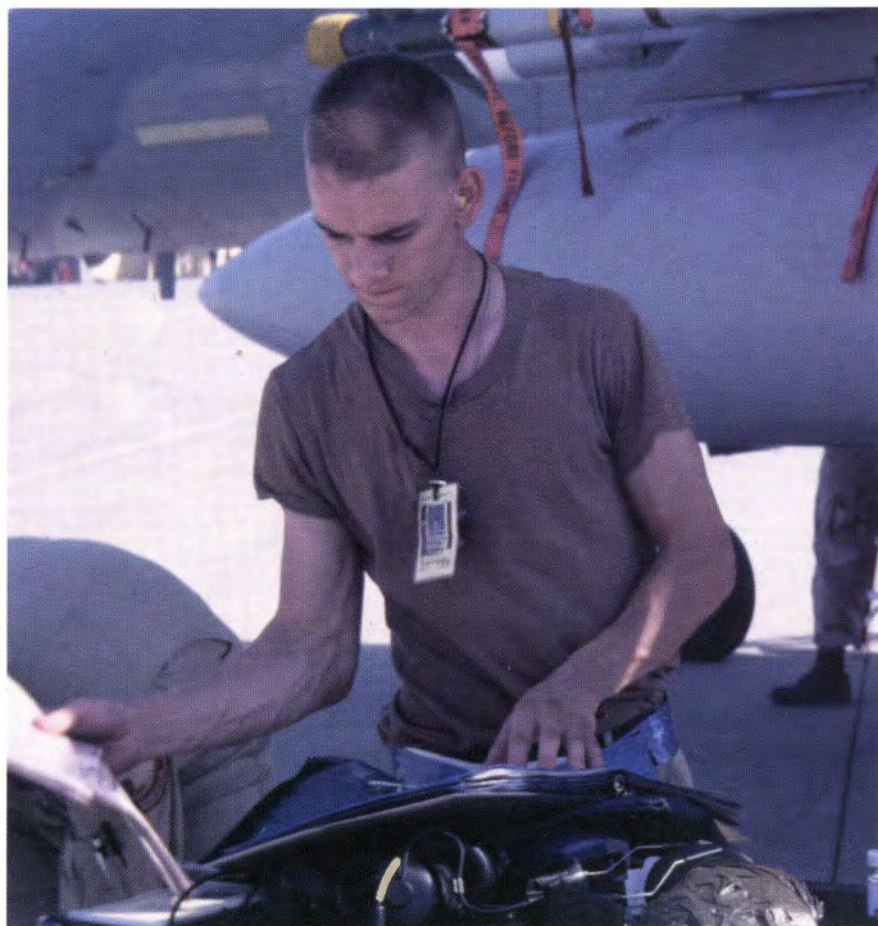
If you’re not yet convinced this is true, allow me to share with you a well-known principle in the safety circles. Every mishap results from a specific series of events, and these events are usually abnormal. By abnormal, I mean that (usually) a

person let an unsatisfactory condition go unnoticed or simply didn’t document or fix it properly. Each abnormal event, by itself, may not result in a tragic mishap. However, combining it with another factor or condition could result in a smoking hole. It is one of the primary functions of a Safety Investigation Board (SIB) to reconstruct that unique chain of events that led to the mishap. They meticulously establish a chronological list of events and situations called “findings.” For those findings that highlight a violation of standards (e.g., a violation of MX 101), they may label the finding “causal.” In other words, if it is determined that any one of the events labeled “causal findings” did not occur, it is reasonable to conclude that the causal chain would have been broken; and the mishap

would not have occurred.

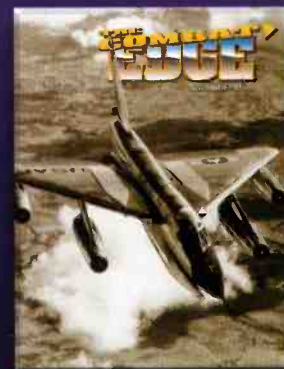
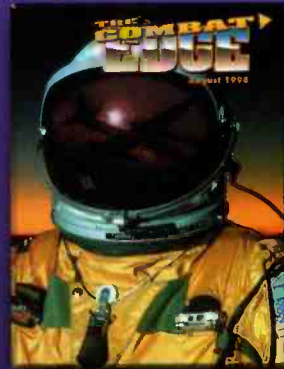
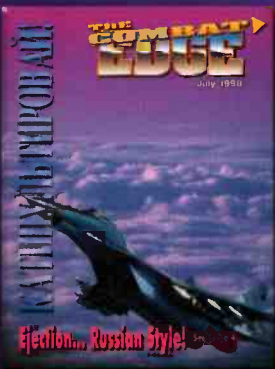
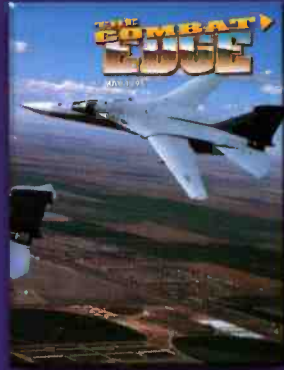
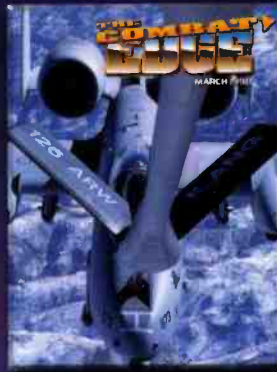
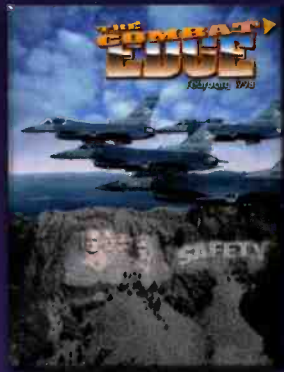
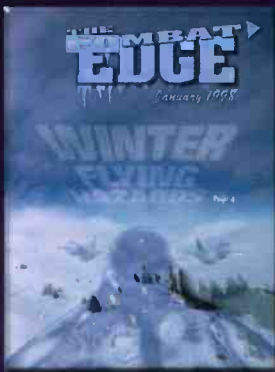
Every time I read a mishap report involving MX 101 violations, I have to believe that many other violations of MX 101 routinely occur in that same unit or operation. It just happens that every so often these breaches of time-tested standards combine into a chain of events that results in a tragic mishap. These violations that seemed invisible before the mishap become painfully obvious after the mishap.

Are you harboring a few “causal steps” in your unit right now that potentially could develop into a mishap chain of events? Even if your answer is no, let me stress the theme of this article once again — **Always comply with the precepts of MX 101.** Your focused effort can keep you from becoming a “causal link” to disaster. ■



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Editor's note:

The following index of articles is provided in an effort to make it easier for our readers to tap the reservoir of knowledge contained in previous issues of *The Combat Edge*. All of the articles listed in this index were published in 1998 and are available for viewing at the following website address:
<http://www.acc.af.mil/public/combat-edge/>

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We solicit your comments and suggestions concerning the index (or *The Combat Edge* in general) so we can better serve our readers. Send us a note, or give us a call. Our address, phone number, and e-mail address are printed inside the front cover of the magazine.

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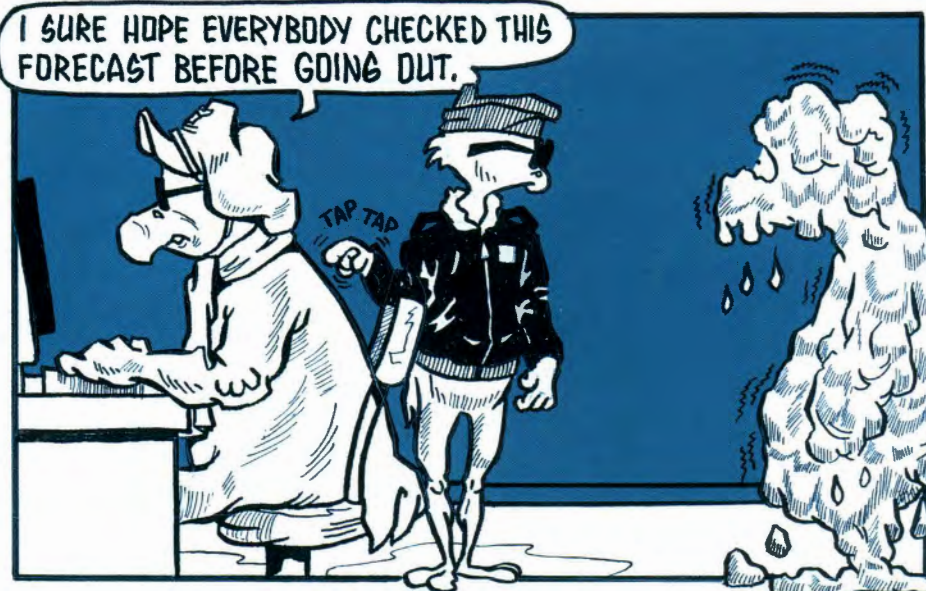
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Fleagle



Indoor Air Quality

SMSgt Gary Reniker, USAFR, 442 FW/SE, Whiteman AFB MO

Most people agree that indoor environments are good when they are odor-free, have adequate circulation, and the temperature and humidity are comfortable. These factors often are taken for granted; but when there is a problem, occupants notice it right away and become annoyed or even experience varying degrees of illness.

An enclosed building can compromise air quality. Air can often become stale, dusty, too hot, or too cool. At home, a simple remedy would be to open a door or window; but at work, this often cannot be done. Complaints about air quality are more likely when there are new furnishings, uncontrolled renovation activities, poor air circulation, or persistent moisture.

When kept indoors, most people will say they need to "get outdoors for some fresh air." This response has become more common since the 1970's when buildings were designed to be "energy efficient." People often find air in large, enclosed buildings to be "stale," especially where air handling systems have become obsolete or in need of repair.

Just as outdoor air can become saturated with "smog" or other pollutants, the air you breathe indoors over the course of a work-

day can accumulate carbon dioxide, dust, or other contaminants. These contaminants may originate from both indoor and outdoor sources. Airborne chemicals, bacteria, fungi, pollen, and dust may contribute to the problem, along with other factors such as improper temperature, humidity, or noise levels.

Unless you are on a maintenance team, it probably isn't your responsibility to maintain the heating, ventilation, and air conditioning (HVAC) system in your building; so it is important to tell the proper people about potential problems you may notice. Make a list of potential indoor air quality problems you experience, and address them with a supervisor who can initiate solutions.

What can you do to control indoor air quality contaminants? The best way to prevent indoor air quality problems varies depending on their sources; however, controlling at the source is generally the most cost effective solution. Some things you can do to make your indoor environment more comfortable include:

- Shut off warehouse forklifts and other exhaust-producing machinery when not in use for more than 1 minute.
 - Store chemicals and cleaning materials which might produce fumes. These materials should be stored in a closed room with an exhaust fan and never near an intake vent which could foul the air of the entire building.
 - Wear masks or respirators when doing dusty operations.
 - Cook only in designated areas with proper ventilation.
 - Smoke only in designated smoking areas. (Remember, with few exceptions, "no smoking" is allowed in Air Force facilities.)
 - Schedule remodeling or painting work to be done during non-peak working hours.
- In summary, a satisfactory level of indoor air quality is of the utmost importance. Proper operation and maintenance of the building's ventilation system is key to accomplishing this. If the quality of the air in your workplace needs improvement, initiate steps now with your management to see that it gets done. ■
- Keep the humidity level between 30 to 50 percent. Dust mites and other biological contaminants thrive in moist climates.

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